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FOREST INDUSTRIES

LOGGING/PULPWOOD/FORES[illegible]UMBER/PANELS

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SERVICE INC
STATISTICAL REFERENCE IND
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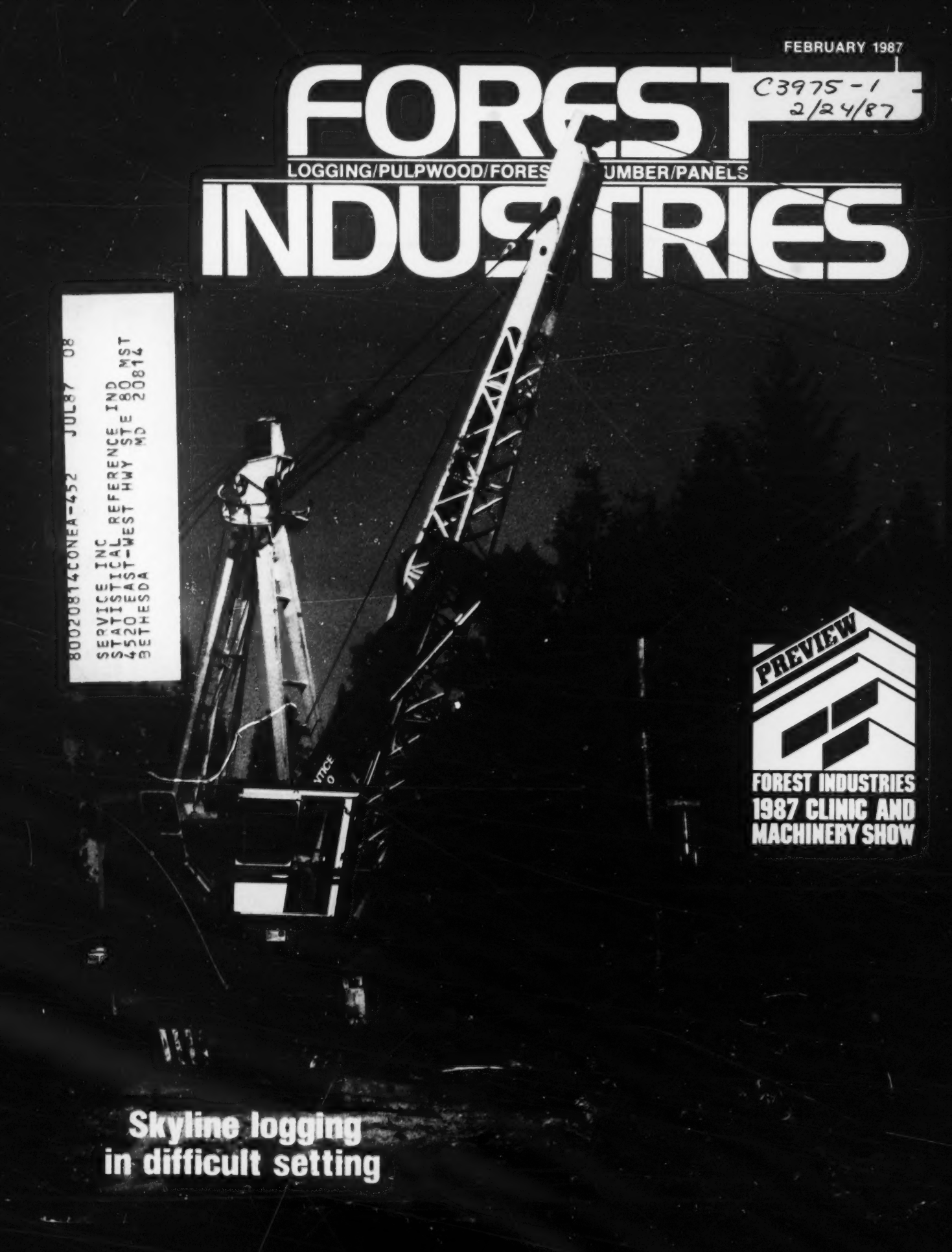
BETHESDA MD 20814



PREVIEW

FOREST INDUSTRIES 1987 CLINIC AND MACHINERY SHOW

Skyline logging in difficult setting

1987 Volume 114 Number 2

FEBRUARY

Woods

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Loggers are becoming an 'endangered species,' says veteran Oregon logger
In more than 30 years of pulling timber out of the woods, Dale Johns, Azalea, Ore., has encountered all sorts of problems. Insurance woes are the latest crisis he has to face

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Flexible crews ensure consistent high volume
Glenn Thompson, Chester, S.C., works under the theory of wearing out machinery rather than trading, but extended warranty programs may change that, he says

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Long-span cable system breaks with NW tradition
After spending time selling an Austrian yarding system, Larry White, Packwood, Wash., bought a system and started a logging outfit

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SPECIAL PREVIEW: 1987 Portland Clinic and Machinery Show
The 15th annual FOREST INDUSTRIES Clinic & Machinery Show will feature nine workshops and more than 250 exhibitors. See complete details inside

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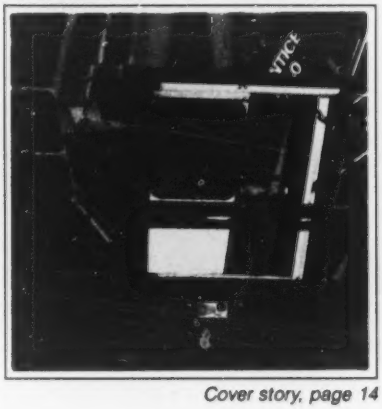

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FI's capital spending survey figures again dominated by new board plants, but reflect increased confidence of lumber and plywood segments; new vitality in West

Spending patterns shift as dollar totals increase

Reported capital spending projects, North American solid-wood industry, 1986-88, by product and start-up year (millions of US$)

	1986	1987	1988+	Total
UNITED STATES				
Lumber	**39.6**	**62.3**	**87.7**	**189.5**
New mills	11.0	22.4	37.0	70.4
Modernization	28.6	39.9	50.7	119.1
Plywood and veneer	**20.7**	**22.9**	**22.8**	**66.5**
New mills	—	14.0	—	14.0
Modernization	20.7	8.9	22.8	52.5
Waferboard/OSB	**180.0**	**160.0**	**150.0**	**490.0**
New mills	150.0	160.0	150.0	460.0
Modernization	30.0	—	—	30.0
Particleboard	**5.5**	**55.0**	**60.0**	**120.5**
New mills	—	40.0	60.0	100.0
Modernization	5.5	15.0	—	20.5
MDF	**50.0**	**55.0**	**50.0**	**155.0**
New mills	30.0	40.0	50.0	120.0
Modernization	20.0	15.0	—	35.0
Energy	**—**	**75.0**	**100.0**	**175.0**
Other	**17.8**	**—**	**—**	**17.8**
TOTAL U.S.	**313.5**	**430.2**	**470.5**	**1214.3**
CANADA (in US$)				
Lumber	**31.4**	**77.7**	**6.6**	**115.7**
New mills	—	54.0	—	54.0
Modernization	31.4	23.7	6.6	61.7
Waferboard/OSB	**36.5**	**51.2**	**35.8**	**123.4**
New mills	36.5	50.1	35.8	122.3
Modernization	—	1.1	—	1.1
Particleboard	**2.2**	**—**	**—**	**2.2**
Modernization	2.2	—	—	2.2
MDF	**29.2**	**28.5**	**—**	**57.7**
New mills	29.2	28.5	—	57.7
Other	**1.8**	**10.0**	**—**	**11.8**
TOTAL CANADA	**101.1**	**167.4**	**42.3**	**310.8**
TOTAL NORTH AMERICA	**414.6**	**597.6**	**512.9**	**1525.1**

NOTE: Totals may not agree due to rounding.

San Francisco, California

Like a dazed fighter shaking away the cobwebs after an eight count, the North American forest products industry has assembled the pieces of a comeback effort in an extended post-recovery period that has seen overcapacity, depressed prices, uncertain raw material strategies, the prolonged Canadian softwood lumber import controversy and strikes interfere with the orderly planning of capital spending strategies.

Our second annual capital spending survey reflects the increased confidence of the industry, documenting projects over a three-year period valued at an estimated $1.525 billion. This survey covers 1986, 1987 and 1988.

Last year, the survey for a comparable period, 1985 through 1987, indicated projects valued at $1.029 billion. Granted that two overlapping three-year periods do not lend themselves to a scientific comparison, but as a general barometer of the industry's progress that's a 48.2% jump.

The tables summarize 182 projects by industry segment, year of scheduled completion, state, province, region and country. Canadian dollar figures in all cases were converted to U.S. dollar amounts at the rate of 0.73:1. (Interesting to note the stability between the two currencies: that was the same factor we used last year. Both came from current issues of *The Wall Street Journal.)*

Companies are a trifle more willing to commit a year or so ahead than was the case a year ago. Last year's survey showed 50% of the total in the year just past, 38.2% in the current year and 11.7% in the year to come. This year's survey total was distributed 27.2% in the year just past, 39.2% in the current year and 33.6% in 1988. (Projects extending beyond 1988 were included in that year's totals.)

The actual dollar amounts for 1986 and 1987 were also greater in this year's survey: $414.6 million and $597.6 million, respectively, versus $393.5 million and $120.8 million in last year's report.

Most capital spending activity in the

reconstituted wood panel industry is centered on new plants, while the lumber and plywood industries are currently undergoing a surge of mill remodeling projects.

Board plants, new and modernized, accounted for 62% of the estimated survey value. Sawmill projects accounted for 20%, plywood for 4.4% and the "other" category—boosted by the high price tags on wood-fueled energy plants—for 13.4%.

Most sawmill and plywood modernization projects are aimed at improving productivity and product recovery. This augurs well for suppliers of scanning and optimizing equipment as well as headrigs, carriages, edgers, trimmers and sorters—all mentioned prominently among survey responses.

Among plywood producers, X-Y chargers, lathe rebuilds, power nosebars and core drives, shortened and synchronized tray systems, rotary clippers and veneer stacking systems were indicated frequently.

The survey includes seven new sawmills, one new veneer plant, 15 new OSB and/or waferboard plants, two new particleboard plants and five new MDF plants. Also indicated are 98 sawmill, 32 plywood and nine board plant remodeling projects.

The "other" column includes projects as diverse as a pole mill, treating plants, panel surface laminating lines and wood-fueled electric energy plants.

One major change since last year's survey is a shift in regional emphasis in the U.S. The South still leads but it has a smaller slice of the pie. Percentages of the U.S. dollar total by region in last year's survey were: South, 62.8%; West, 21.8%; North Central/Midwest, 8.8%; and Northeast, 7.6%.

This year's survey shows the effect of the many West Coast sawmill and plywood plant remodeling projects: South, 46.1%; West, 35.1%; North Central/Midwest, 4.6%; and Northeast, 14.2%.

Methodology was the same as it was last year. Questionnaires were sent in original and follow-up mailings, and to these responses were added projects indicated in news reports which we have published since the last survey. Also included were United States and Canadian panel plants verified by a supplier survey which is an annual feature of WORLD WOOD, our international journal.

A number of the responses were exceptionally detailed and candid. These represented a mixture of large and small companies alike, and we would like to thank all who responded for their help. Certainly there are other public corporations who will reveal no more than the Securities and Exchange Commission requires, and they are represented in this survey through the channels indicated in the preceding paragraph.

Where dollar amounts were not divulged, we entered our own estimates based on similar projects. This was necessary in only 14% of the cases, however—a far better record than was the case last year. The full list of projects contained in the survey database will be contained in the initial volume of the FOREST INDUSTRIES FACTBOOK, to be published later this year. ■

—Dave Pease

Reported capital spending projects, North American solid-wood industry, 1986-88, by state/province and region (millions of US$)

	Lumber	Plywood	Board	Other	Total
Alabama	9.6	—	50.0	0.1	59.7
Arkansas	6.4	7.2	15.0	—	28.7
Florida	0.9	—	—	—	0.9
Georgia	2.9	0.8	40.0	—	43.7
Kentucky	1.0	—	—	—	1.0
Louisiana	1.1	3.3	43.0	—	47.4
Maryland	—	—	—	2.5	2.5
Mississippi	3.3	0.5	—	—	3.8
N. Carolina	5.2	—	110.0	—	115.2
S. Carolina	—	7.6	—	—	7.6
Tennessee	3.0	—	—	—	3.0
Texas	30.4	11.0	110.0	—	151.4
Virginia	—	—	95.0	—	95.0
SOUTH	**64.0**	**30.4**	**463.0**	**2.6**	**560.0**
California	21.3	—	—	100.0	121.3
Idaho	54.4	—	—	—	54.4
Montana	2.0	12.4	40.0	—	54.4
New Mexico	6.0	—	—	—	6.0
Oregon	29.5	7.9	72.5	15.0	124.9
Washington	9.4	15.3	40.0	—	64.7
Wyoming	0.4	—	—	—	0.4
WEST COAST	**123.0**	**35.6**	**152.5**	**115.0**	**426.1**
Illinois	—	0.5	—	0.2	0.7
Michigan	—	—	40.0	—	40.0
Minnesota	—	—	15.0	—	15.0
N. CENTRAL	**—**	**0.5**	**55.0**	**0.2**	**55.7**
Maine	2.5	—	15.0	50.0	67.5
New Hampshire	—	—	—	25.0	25.0
New York	—	—	20.0	—	20.0
Pennsylvania	—	—	60.0	—	60.0
NORTHEAST	**2.5**	**—**	**95.0**	**75.0**	**172.5**
TOTAL U.S.	**189.5**	**66.5**	**765.5**	**192.8**	**1214.3**
Alberta	—	—	94.9	—	94.9
B.C.	98.9	—	20.9	10.0	129.7
W. CANADA	**98.9**	**—**	**115.8**	**10.0**	**224.8**
N.B.	0.1	—	—	—	0.1
Ontario	6.1	—	—	1.8	8.0
Quebec	10.6	—	67.5	—	78.1
E. CANADA	**16.8**	**—**	**67.5**	**1.8**	**86.2**
TOTAL CANADA	**115.7**	**—**	**183.3**	**11.8**	**310.8**
NORTH AMERICA	**305.2**	**66.5**	**948.8**	**204.6**	**1525.1**

NOTE: Totals may not agree due to rounding.